Amendment to the Specification:

Please replace the Summary section of the Specification, with the following Amended Paragraphs:

SUMMARY

The invention comprises an electro-mechanical continuously variable transmission (EMCVT) that uses a planetary gear system to provide a combination of electric and mechanical power for a vehicle or for stationary equipment. The EMCVT includes a ~~clutch and brake system that allows power from an energy storage unit to be combined with the main power input (typically an engine) to provide a torque output greater than that available from the main power input alone~~ an input shaft to receive power from an enging, an output shaft, a generator, a planetary gear set coupled to the input shaft, the output shaft and to an input of the generator and a motor coupled to the output shaft by a gear set having a fixed speed ratio. An energy storage device is coupled to the generator and to the motor. The energy storage device is operative to accept power from and supply power to the generator and the motor. A controller coupled to the motor, generator and battery is operative to regulate power flow between the energy storage device and the generator, the energy storage device and the motor and between the generator and the motor. A split speed clutch is coupled to two elements of the planetary gear set and is operative to lock the two elements together and permit direct transfer of all power between the generator and the input shaft. A generator lock up brake is coupled to the generator and is operative to lock out the electric branch and force all power through the mechanical branch when the transmission output is operating at a pre-selected percentage of its maximum speed. A generator output clutch is coupled between the generator and the motor and is operative in a locked

mode to lock the generator to the motor. A mechanical drive clutch is coupled between one element of the planetary gear set and the output and is operative to lock together the one element of the planetary gear set to the output allowing the planetary gear set to split power between the generator, the input shaft and the output shaft.

The EMCVT may also include a range splitter system to expand the operating parameters of the vehicle or stationary equipment.

The EMCVT may further include a regenerative steering system to control power distribution between the two ends of the main output shaft.

While the EMCVT can provide output in both forward and reverse direction, it may optionally include a reversing gear system coupled at either the main power input or the main output shaft. The reversing gear system allows the EMCVT to provide an output in the reverse direction while the components in the electrical and mechanical operate in the same fashion as the forward direction.

Preferably, the split speed clutch is engaged, allowing the generator to act as a starting motor and send power to the input.